

# NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

## F A C T      S H E E T (pursuant to NAC 445A.236)

**Permittee Name:** Mars Retail Group, Inc. (formerly Ethel M Chocolates, Inc.)  
1 Sunset Way  
Henderson, Nevada 89014

**Permit Number:** NEV96014

### **Description of Discharge**

**Location:** The Ethel M Chocolates manufacturing facility is located at 1 Sunset Way in Henderson, Clark County, Nevada. Latitude: 36E 04' 28"N.; Longitude: 115E 04' 16"W.; Section 32. T. 21S., R. 62E. MDB&M.

**Characteristics:** Process wastewater generated in the manufacture of Ethel M Chocolate candies is made up of various wash, rinse and floor drain waters, cooling tower blow down water, boiler blow down water, and condensate. This wastewater is discharged by gravity from Building 2 and by pump from Building 1 to a grease trap. From the grease trap the wastewater flows by gravity to the influent pump station prior to entering the "Living Machine" and constructed wetlands treatment system. All sanitary sewage is separate, and is discharged to the City of Henderson sewer. Flows of the process wastewater may be directed to the sanitary sewer during maintenance events on the "Living Machine" or wetlands. This permit allows reuse of the treated process wastewater for landscape irrigation.

**Flow:** Flows vary from 0.006 MGD to 0.015 MGD; design flow is 0.032 MGD.

**Limitations:** Outfall 001 is the discharge from the final treated effluent pump station prior to on-site landscape irrigation reuse.

**Flow:** Outfall 001      0.032 MGD 30-day average

The following parameters are monitored monthly and reported quarterly: BOD<sub>5</sub>, COD, TSS, FOG, TDS, TKN, NITRATE as N, TOTAL PHOSPHORUS as P.

The "Living Machine" and constructed wetlands system is designed to produce an effluent of the following quality: BOD: <10 mg/l; COD: <30 mg/l; TSS: 5-10 mg/l; FOG: 1 mg/l; TKN: 2 mg/l; and TOTAL PHOSPHORUS: <3 mg/l.

**General:** The process wastewater treatment system for Mars Retail Group, Inc=s Ethel M Chocolates is The "Living Machine" and a constructed wetlands system which utilizes a biologically complex set of aerobic environments. Six closed aerobic reactors (digesters) in two parallel trains of three, and twelve open aerobic reactor cells (in four parallel trains in series) filled with a variety of plant species with extensive root masses which provide an environment for microbial activity, nutrient removal and gas exchanges which remove most organic loading, including fats and particulates. Included in these reactors are snails, fish, zooplankton and other organisms which provide a robust ecosystem for optimal function of the reactors. Four clarifiers remove excess biosolids which are pumped to a 2000 gallon holding tank for storage. Effluent from the clarifiers passes into the Ecological Fluidized Beds (EFB's) (four trains of two each) filled with pumice rock to polish the wastewater by removing most of the remaining organics and solids. Next, in a lined constructed wetland the water flows through gravel below the surface where it is further filtered and exposed to plants and microorganisms. From there the treated water flows to the pond system for storage. The finished water produced is a quality suitable for reuse on-site for irrigation. A lined reed bed dewateres and composts solids from the clarifiers and the EFB's; the compost is used in the adjacent cactus garden as a soil amendment. Leachate from the reed bed is pumped back to the first two closed aerobic reactors. Odor control for the closed reactors at the head of the treatment train is provided in the earth filter located near the reactors.

The "Living Machine" treatment trains are located in an open concrete enclosure which has a Cravo fabric computer controlled closure system to control the climate/air temperature for the system. Process controls and monitoring are handled by an on-line computerized process management system for the ALiving Machine@. As needs dictate, the "Living Machine" may be bioaugmented with organisms designed to enhance the metabolism of organic matter and fats, to reduce sludge production, and to nitrify and denitrify.

**Receiving Water Characteristics:** The depth to groundwater averages sixty feet. Adverse effects to the groundwater are not expected.

**Procedures for Public Comment:**

The Notice of the Division's intent to reissue a discharge permit to the facility, subject to the conditions contained within the permit, is being sent to the **Las Vegas Review-Journal and Henderson Home News** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing or FAX for a period of 30 days following the date of publication of the public notice, by November 16, 2007. The comment period can be extended at the discretion of the Administrator.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons.

The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determined to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

#### **Proposed Determination**

The Division has made the tentative determination to reissue the proposed permit for a period of five (5) years.

#### **Proposed Effluent Limitations, Schedule of Compliance**

None

#### **Rationale for Permit Requirements**

Monitoring is being required to ensure system performance and that the groundwaters of the State are not degraded.

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